FOCAL LENGTH DISPERSION COMPENSATION FOR FIELD CURVATURE

ABSTRACT OF THE DISCLOSURE

An optical arrangement and method are provided for receiving a light beam

5   having a plurality of spectral bands and directing subsets of the spectral bands along optical

paths to respective optical elements. The light beam is received at an input port. The optical

elements are configured as a substantially planar array. A dispersive element is configured to

~~diffract~~ the light beam, after it has been collimated, into a plurality of angularly separated

beams that correspond to the plurality of spectral bands. A first focusing element is disposed

10   with respect to the dispersive element and with respect to the array of optical elements such

that ~~dispersion in the focal distance of the first focusing element for different angularly~~

~~separated beams compensates for field curvature aberration caused by the first focusing~~

~~element.~~

which route the spectral bands SW 2/8/01 RFC 2/8/01

angularly spread SW 2/8/01 RFC 1/8/01

15   variation of focal length with wavelength of the separated beams is compensated by the field curvature of the system, and the final image surface is flattened.   SW 2/8/01   RFC 2/8/01

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